

**Clements's Flowers of Mountain and Plain\***

In part this book is an abridged edition of "Rocky Mountain Flowers," in the sense that it contains the same 25 color plates illustrating one hundred and seventy-five of the most striking western mountain and plains wild flowers. There are no keys nor technical descriptions, for the volume is intended primarily for travelers and flower lovers who wish a souvenir of their trip in this region, and who desire a means of easily recognizing flowers met on tramping excursions, or seen from car windows or an automobile. Each plant illustrated is accompanied by text giving both its common and scientific names, something about the kind of place it grows in, its time of bloom, and often other facts concerning its life history which would be of general interest. For example, in many cases the edible parts of the plant are noted, while in other cases facts regarding insect pollination, stock poisoning or some ancient superstition are set down. In the reviewer's opinion, this is just the sort of book to give your unbotanical friend living in that region or who is going there on a vacation. It is compact, nicely bound and authoritative.

ORLAND E. WHITE.

**Harshberger's Pastoral and Agricultural Botany†**

Although issued as a textbook of agricultural botany for colleges and possibly secondary schools, this volume, from its contents, is evidently intended primarily for a very limited group of students, such as those interested in veterinary science or in range problems. The reviewer can not think of any agricultural college in which this volume could be profitably used as a regular course text. Approximately one third of the book, or nine of the eighteen chapters, is devoted to stock-poisoning plants, their distribution, their effect on stock and human beings, and the remedial measures. The remaining nine chapters consist of one on feeds and feeding, three on grasses with emphasis on their economic

\* Clements, Edith S. *Flowers of Mountain and Plain*. 2d ed., enlarged. Pp. 79. Illustrated. The H. W. Wilson Co., New York. 1920. Price \$2.75.

† Harshberger, John W. *Pastoral and Agricultural Botany*. Pp. xiii + 294. Illustrated. P. Blakiston's Son & Co. Philadelphia. 1920. Price \$2.00.

phases, such as their importance as cereals and forage plants; two chapters emphasizing in some detail the economic value of the legume or pea family, and one chapter on the value of certain bacteria in accumulating nitrogen. This chapter (XVI) mentions the value of green manures and the failure of the preparation "nitragen" in disseminating the nitrogen bacteria. It also contains a long list of nitrogen-consuming plants, very tersely described and classified as to part of plant economically valuable. The final two chapters are devoted to weeds and weed control and agricultural seeds, seed selection and seed-testing. The author evidently considers plant breeding and genetics, plant physiology and plant diseases as subjects of too specialized a nature to include in an elementary agricultural text. So far as the reviewer can determine, they are not considered. Extensive bibliographies on each subject are given, most of the material being very accessible. Many interesting problems are touched upon. On page 219 the fertilizer waste due to the common method of sewage disposal from large cities is discussed, while on page 83 a method of desensitizing human beings against poison ivy is described. The treatment takes one month and gives immunity for one month. On pages 90-91 is a detailed account of Socrates' death by poison hemlock, taken from Plato. On page 62 the planting of garden larkspur in masses about gardens is advised by Froggat because of its poisonous nature, as a protection against locusts and grasshoppers. Other species are cited as deadly to maggots and ticks. This treatment, in the reviewer's opinion, would probably prove about as efficacious as the proverbial Frenchman's flea-powder, or the use of castor bean plants as protection against mosquitoes. On pages 15 and 82 blondes (blue eyes) are said to be very susceptible to poison ivy, while brunettes (dark, swarthy skins) are practically immune. This statement does not accord with the reviewer's experience. Among eleven blondes questioned, six, including the reviewer, were practically immune, while five were susceptible. Of six brunettes, five were susceptible and one was practically immune. On page 101 nightshade berries (*Solanum nigrum*) are mentioned as poisonous. On page 131, Pt. II, Pam-

mel's Manual of Poisonous Plants, green berries of this plant are stated to be poisonous to man, but the ripe berries have been eaten by Pammel and others with no ill effects. In South Dakota the reviewer has often seen them eaten with no ill effects. In fact, they are gathered and, after cooking, used for delicious pie filling. On page 80 two questionable statements occur regarding the castor bean, viz., "Flowers are borne in separate clusters as pistillate and staminate," "Poultry have been poisoned by eating the seeds." As well known, castor bean flowers are borne on different parts of the same flower spike. Poultry are stated to be especially immune to castor bean poisoning. (Nat'l Dispens., 2d ed., p. 1146; Pammel's Poisonous Plants, Pt. II, p. 594.) One hardly refers to the horsetail (*Equisetum*) as "this fern plant" (p. 39) in modern botanies. On page 74 loco-weed, *Aragallus lamberti*, is referred to as white-flowered in large areas in Colorado, Wyoming and Montana, while such authorities as Rydberg, Coulter and Nelson, Britton, and Gray describe the flowers of this species as purplish or violet, "rarely white" or "seldom yellowish." Rydberg and Chesnut apparently regard the white-flowered loco-weed as *Aragallus spicatus* (Hook.) Rdbg. The book is attractively bound in limp cloth and the illustrations are good.

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